

Appl. No. 10/605,703  
Response Dated January 13, 2006  
Reply to Office Action Dated October 18, 2005

### REMARKS/ARGUMENTS

Please reconsider the application in view of the above amendments and the following remarks. Claims 1-60 remain in this application. Claims 19 and 23 are amended herein.

The Examiner has indicated that claims 11-51 and 56-58 are allowed. The Examiner further indicated that claims 2-10 and 53-55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim. For reasons stated below, Applicant believes that the base claims from which these claims depend are allowable and that there is no need to rewrite these claims in independent forms. Accordingly, Applicant respectfully defers rewriting the claims at this time.

#### **Rejection(s) under 35 U.S.C § 112**

Claims 59-60 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. The Examiner indicated that "[i]t does not appear that the cable is disposed after detecting the fault, but rather is always present." Applicant refers the Examiner to paragraph [0103] of the specification, which states "upon detecting the presence of a fault...a cable 112 is disposed within the drill string 6 for establishing a second communication link 5b (step 660)." This text refers back to the cable 112 depicted in Figs. 2A and 2B which is used to bypass failures. *See, e.g., paragraph [0081].* Based on this description, the cable may be disposed after detecting the fault as recited in the claims. Applicant, therefore, submits that no correction is required and requests withdrawal of the rejection under 35 U.S.C. § 112.

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### Claim Objections

The Examiner objected to claims 19 and 23 for various informalities. Applicant has amended claims 19 and 23 as suggested by the Examiner to resolve these informalities. No new matter has been added by way of this amendment. Applicant respectfully submits that these amendments obviate the objection.

### Rejection(s) under 35 U.S.C § 102

Claims 1 and 52 stand rejected under 35 U.S.C. § 102 as being unpatentable over Schlumberger (WO 00/29717) or Wittrisch (5353872). This rejection is respectfully traversed.

Claims 1 and 52 each recite *inter alia* adapter subs spaced apart within a drill string and a cable connecting the adapter subs. As shown in Fig. 1A, a drill string (6) with a bit (15) at a lower end thereof is advanced into the earth to form the wellbore. As stated in the specification, the drill string (6) includes plurality of interconnected tubular members, and a cable communication link (5b) having at least two spaced apart adapter subs. *See, e.g., Fig. 1A and paragraphs [0062 - 0065]*. As shown in Figs. 1B, 1C and 2A, 2B, a cable (112) is positioned in the drill string (6) and connects adapter subs (9a, 9b). *See, e.g., Figs. 1B, 1C, 2A, 2B and paragraph [0065]*.

The cited art fails to provide *inter alia* adapter subs spaced apart within a drill string or a cable connecting the adapter subs. In contrast, WO 00/29717 relates to a system for use in a well having completion zones. *See, WO 00/29717, p. 1, lines 17-22*. There is no disclosure in WO 00/29717 of a drill string at all. In fact, as specifically stated in the specification, such completion operations occur "[a]fter a wellbore has been drilled." *See, WO 00/29717, p. 1, lines 3-6*. Moreover, the communication system is directed at completion operations used to control

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fluid production from one or more zones in the well. *See WO 0029717, p. 1, lines 3-6.* Thus, such completions operations and the communication system provided in WO 00/29717, would not involve the use of a drill string or occur during the drilling operation. Thus, WO 00/29717 fails to teach or even suggest each of the limitations recited in claims 1 or 52 (or the claims that depend therefrom). Applicant, therefore, requests withdrawal of the rejection under 35 U.S.C. § 102 based on WO 00/29717.

Wittrisch also fails to teach *inter alia* the recited limitations. Wittrisch describes a system for carrying out measurements in a well. The system includes a sonde (25) for taking downhole measurements linked with the surface by connectors (8, 9) and cables (6, 7). *See, Fig. 1.* The system as described in Wittrisch is used to provide intermediate supports to take up the weight of a cable (*See, Wittrisch, Col. 2, lines 21-30*), not to provide a communication link across portions of a drill string. There is simply no disclosure in Wittrisch of adapter subs spaced apart within a drill string and a cable connecting the adapter subs for communication of a signal therebetween. There is also no disclosure of using such adapter subs and a cable that bypasses drill collars to provide a communication link between non-adjacent drill collars. Wittrisch fails to appreciate the problem of communication failures across portions of a drilling system, or the solution of using adapter subs in the drill string and joined by a cable to bypass such failures. Wittrisch fails to teach or even suggest at least these limitations and, therefore, fails to support a rejection under 35 U.S.C. § 102.

In view of the above, the cited art fails to anticipate the claimed invention. Applicant, therefore, requests withdrawal of the rejection(s) under 35 U.S.C. § 102. Moreover, Applicant

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submits that the cited art (alone or in combination) also fails to render obvious the claimed invention.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Applicant believes this reply to be fully responsive to all outstanding issues and place this application in condition for allowance. If this belief is incorrect, or other issues arise, do not hesitate to contact the undersigned at the telephone number listed below.

This paper is submitted in response to the Office Action dated October 18, 2005 for which the three-month date for response is January 18, 2006. Please apply any charges not covered, or any credits, to Deposit Account 19-0610 (Reference Number 19.0351).

Date: 1/13/06

Respectfully submitted,

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